

elected inventions. Applicants reserve the right to prosecute claims directed to these non-elected inventions in further continuing applications. A clean copy of the now pending claims 1-16 and 44-46 is provided herewith in Attachment A.

Due to the Restriction and Applicants' decision to prosecute the claims of Group I, Claims 1, 4, 5, and 7 have been amended to further exemplify the inventions embodied by the presently elected claims drawn to Group I in the restriction, and claims 44-46 have been added. Support for the amended and added claims can be found on at least pages 7, 8, and 11-13 of the specification. Accordingly, it is believed that no new matter has been introduced.

Respectfully submitted,

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ATTACHMENT A

1. (Once Amended) An isolated nucleic acid molecule comprising (a) a DNA molecule encoding a UCP4 polypeptide comprising the sequence of amino acid residues from about 1 to about 323 of Figure 1 (SEQ ID NO: 1), or (b) the complement of the DNA molecule of (a).
2. The isolated nucleic acid molecule of claim 1 comprising the sequence of nucleotides from about 40 to about 1011 of Figure 2 (SEQ ID NO: 2).
3. The isolated nucleic acid molecule of claim 1 comprising the nucleotide sequence of Figure 2 (SEQ ID NO: 2).
4. (Once Amended) An isolated nucleic acid molecule comprising DNA encoding a UCP4 polypeptide, wherein said DNA hybridizes under moderately stringent conditions to the complement of the nucleic acid comprising nucleotides from about 40 to about 1011 of Figure 2 (SEQ ID NO: 2).
5. (Once Amended) An isolated nucleic acid molecule comprising (a) a DNA molecule encoding the same mature polypeptide encoded by the cDNA in ATCC Deposit No. 203134 (DNA 77568-1626), or (b) the complement of the DNA molecule of (a).
6. The isolated nucleic acid molecule of claim 5 comprising DNA encoding the same mature polypeptide encoded by the cDNA in ATCC Deposit No. 203134 (DNA 77568-1626).
7. (Once Amended) An isolated nucleic acid molecule comprising (a) DNA encoding a polypeptide having at least an 80% sequence identity to the sequence of amino acid residues from about 1 to about 323 of Figure 1 (SEQ ID NO: 1), wherein said encoded polypeptide has at least one biologic activity of a native sequence UCP4 polypeptide consisting of amino acid residues 1 to 323 of Figure 1 (SEQ ID NO:1), or (b) the complement of the DNA of (a).

8. The isolated nucleic acid molecule of claim 7 comprising (a) DNA encoding a polypeptide comprising the sequence of amino acid residues from about 1 to about 323 of Figure 1 (SEQ ID NO: 1), or (b) the complement of the DNA of (a).

9. An isolated nucleic acid molecule comprising (a) DNA encoding a polypeptide scoring at least 80% positives when compared to the sequence of amino acid residues from about 1 to about 323 of Figure 1 (SEQ ID NO: 1), or (b) the complement of the DNA of (a).

10. A vector comprising the nucleic acid of claim 1.

11. The vector of Claim 10 operably linked to control sequences recognized by a host cell transformed with the vector.

12. A host cell comprising the vector of Claim 11.

13. The host cell of Claim 12, wherein said cell is a CHO cell.

14. The host cell of Claim 12, wherein said cell is an *E. coli*.

15. The host cell of Claim 12, wherein said cell is a yeast cell.

16. A process for producing a UCP4 polypeptide comprising culturing the host cell of Claim 12 under conditions suitable for expression of said UCP4 polypeptide and recovering said UCP4 polypeptide from the cell culture.

44. The isolated nucleic acid of claim 7 wherein said encoded polypeptide has at least a 90% sequence identity to the sequence of amino acid residues from about 1 to about 323 of Figure 1 (SEQ ID NO:1).

45. The isolated nucleic acid of claim 7 wherein said encoded polypeptide has at least a 95% sequence identity to the sequence of amino acid residues from about 1 to about 323 of Figure 1 (SEQ ID NO:1).

46. The isolated nucleic acid of claim 7 wherein said biologic activity of the encoded polypeptide is increasing or decreasing metabolic rate in a mammalian cell.